



*IFW*

Docket No. 0086.03

PATENT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

In re application of )  
 )  
ISABEL M. LIMA ET AL. )  
 ) Group Art Unit 1754  
Activated Carbons from )  
Animal Manure )  
 )  
Serial No. 10/784,049 )  
 )  
Filed February 20, 2004 )

The Honorable  
The Commissioner for Patents  
Sir:

**Information Disclosure Statement**

Pursuant to 37 C.F.R. 1.97 and 1.98, Applicants hereby submit an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS OR OTHER INFORMATION

The patents, publications or other information submitted for consideration by the Office (except U.S. patent applications) are listed on PTO/SB/08a/b attached hereto.

II. COPIES (check at least one item)

- a. X Submitted herewith is a legible copy of (i) each U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all

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|---|-------|
| I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to:<br>Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on |       |
| September 10, 2007<br>(Date of Deposit)   | _____ |
| Randall E. Deck<br>Name of Depositor  | _____ |
| <i>[Signature]</i><br>Signature   | _____ |
| 9/10/07<br>Date of Signature  | _____ |

other information or that portion which caused it to be listed, except that no copy of a U.S. patent application is included.

- b.\_\_\_\_ Any patents, publications or other information which are listed on PTO/SB/08a/b or on the copies of PTO-892 but which are not enclosed herewith were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. 120:

U.S. Serial Number

U.S. Filing Date

III. CONCISE EXPLANATION OF THE RELEVANCE (check at least one item)

- a. X Except as may be indicated below in (b), all of the patents, publications or other information are in the English language (concise explanation not required).
- b.\_\_\_\_ A concise explanation of the relevance of all patents, publications or other information listed that is not in the English language is as follows:
- c. X The following additional information is provided for the Examiner's consideration:

Shinogi et al. (Bioresource Technology) discloses the pyrolysis (carbonization) of sewage sludge and cow manure by heating for use as adsorbents. **The reference also disclosed that the carbonization of poultry manure had been investigated in Japan in 1996 and 1999** (see page 242, first complete paragraph).

Bilitewski discloses the production of activated carbon from poultry droppings and other wastes (page 715, paragraph 1). The activated carbon from poultry droppings is disclosed as having a low BET surface area (page 716, Table 1).

Bagreev et al. discloses the pyrolysis of sewage sludge and cow manure by heating without activation for use as adsorbents.

Shinogi et al. (Advances in Environmental Res.) discloses the pyrolysis (carbonization) of sewage sludge and cow manure by heating for use as adsorbents.

Nickerson et al. discloses the production of both char and activated carbon from the pyrolysis of sewage sludge (col. 2,

lines 10-14).

Sudhakar *et al.* and Beckler *et al.* both disclose the production of activated carbons from various materials, including plant material, by treatment with phosphorous compounds.

Tay, Abe *et al.*, and Chiang and You, and Chen *et al.* all disclose production of activated carbons from sewage sludge.

IV. CROSS REFERENCE TO RELATED APPLICATIONS

The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this (these) application(s) to the Examiner's attention, applicant does not waive the confidentiality provisions of 35 U.S.C. 122:

FEES

V. THIS IDS IS BEING FILED UNDER 37 C.F.R. 1.97(b):  
(check one item)

- a. ☐ Within three months of the filing date of a national application [37 C.F.R. 1.97(b)(1)]. No fee or certification is required.
- b. ☐ Within three months of the date of entry of the national stage as set forth in 1.491 in an international application [37 C.F.R. 1.97(b)(2)]. No fee or certification is required.
- c. ☒ Before the mailing date of a first Action on the merits [37 C.F.R. 1.97(b)(3)]. No fee or certification is required.

VI. THIS IDS IS BEING FILED UNDER 37 C.F.R. 1.97(c):  
before the mailing date of a Final Office Action under 37 C.F.R. 1.113 [See 37 C.F.R. 1.97(c)(1)] or before the mailing date of a Notice of Allowance under 37 C.F.R. 1.311 [See 37 C.F.R. 1.97(c)(2)]. (check one item)

- a. ☐ No certification; therefore, a fee in the amount of \$ 180.00 is required by 37 C.F.R. 1.17(p); or
- b. ☐ See the certification below. No fee is required.

VII. Certification Under 37 C.F.R. 1.97(e)

The undersigned hereby certifies that:  
(check only one item)

- a. ☐ each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS; or
- b. ☐ no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(C) more than three months prior to the filing of this statement.
- c. ☐ Some of the items of information were cited in a communication from a foreign Patent Office. As to this information, the undersigned certifies that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the best of my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement.

VIII. Payment of Fees (check one item)

- a. ☒ NO FEE IS REQUIRED.
- b. ☐ Please charge Deposit Account No. 50-2132 in the amount of \$ 180.00 for the above-indicated fee.

This Disclosure Statement is not to be construed as a representation that: (i) a search has been made; (ii) additional information material to the examination of this application does not exist; or (iii) the cited information constitutes prior art in the subject application.

If this IDS is determined to not fully comply with the rules, the Examiner is urged to contact the undersigned.


Please charge any additional fees or credit any overpayment pursuant to 37 C.F.R. 1.16 or 1.17 to Deposit Account 50-2132.

Respectfully submitted,

Peoria, IL

(309) 681-6515

FAX: (309) 681-6688

  
Randall E. Deck, Agent of Record  
Registration No. 34,078

Enclosures:

- ☒ PTO/SB/08a/b
- ☐ PTO-892
- ☒ References (11)
- ☐ Foreign Search Report
- ☐ Fee
- ☐ Other:

Please type a plus sign (+) inside this box ☒



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| <b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br><i>(use as many sheets as necessary)</i> |                        | Application Number   | 10/784,049        |
|  |                        | Filing Date          | February 20, 2004 |
|  |                        | First Named Inventor | Isabel M. Lima    |
|  |                        | Group Art Unit       | 1754              |
|  |                        | Examiner Name        |                   |
| Sheet 1 of 2   | Attorney Docket Number | 0086.03              |                   |

| U.S. PATENT DOCUMENTS |                       |                      |                                   |   |  |   |
|-----------------------|-----------------------|----------------------|-----------------------------------|---|--|---|
| Examiner Initials *   | Cite No. <sup>1</sup> | U.S. Patent Document |                                   | Name of Patentee or Applicant of Cited Document | Date of Publication of Cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|                       |                       | Number               | Kind Code <sup>2</sup> (if known) |   |  |   |
|                       | AA                    | 3,887,461            |                                   | Robert D. Nickerson et al.                      | 06-03-1975                                       |   |
|                       | AB                    | 6,277,780            |                                   | Robert K. Beckler et al.                        | 08-21-2001                                       |   |
|                       | AC                    | 5,338,462            |                                   | Hisaki Abe et al.                               | 08-16-1994                                       |   |
|                       | AD                    | 5,538,929            |                                   | Chakka Sudhakar et al.                          | 07-23-1996                                       |   |
|                       |                       |                      |                                   |   |  |   |
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| FOREIGN PATENT DOCUMENTS |                       |                         |                     |                                   |   |  |   |                |
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|                          |                       | Office <sup>3</sup>     | Number <sup>4</sup> | Kind Code <sup>5</sup> (if known) |   |  |   |                |
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<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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|   |                        | Filing Date              | February 20, 2004 |
|   |                        | First Named Inventor     | Isabel M. Lima    |
|   |                        | Group Art Unit           | 1754              |
| Examiner Name   |                        |                          |                   |
| Sheet 2 of 2  | Attorney Docket Number | 0086 03                  |                   |

| OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|--|-----------------------|---|----------------|
| Examiner Initials *                                | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.                                 | T <sup>2</sup> |
|  | AR1                   | SHINOGI, Yoshiyuki et al., "Pyrolysis of plant, animal and human waste: physical and chemical characterization of the pyrolytic products", Bioresource Technology, 90, 2003, 241-247.   |                |
|  | AS1                   | BILITEWSKI, Bernd, Thome-Kozimiensky (Ed), "Production & Possible Applications of Activated Carbon From Waste", Recycling Berlin '79 International Congress, Berlin XI, 714-721, 1979   |                |
|  | AT1                   | BAGREEV, Andrey et al., "Sewage Sludge-Derived Materials as Efficient Adsorbents for Removal of Hydrogen Sulfide", Environmental Science & Technology, 35, No. 7, 2001, 1537-1543   |                |
|  | AU1                   | SHINOGI, Y, et al., "Basic Characteristics of Low-Temperature Carbon Products From Waste Sludge", Advances in Environmental Research, 7, 2003, Pgs. 661-665   |                |
|  | AV1                   | CHEN, Xiaoge, et al., "Physical and Chemical Properties Study of the Activated Carbon Made From Sewage Sludge", Waste Management, 22, 2002, pgs. 755-760.   |                |
|  | AW1                   | CHIANG, P.C., et al., "Use of Sewage Sludge for Manufacturing Adsorbents" The Canadian Journal of Chemical Engineering, Vol. 65, Dec. 1987, pgs. 922-927  |                |
|  | AX1                   | TAY, J. H. et al., "A Comparative Study of Anaerobically Digested and Undigested Sewage Sludges in Preparation of Activated Carbons", Chemosphere, 44, Iss 1, July 2001, 53-57, retrieved online [http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6V74-435CF43-8&_user=4250348&_c...] |                |
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